

# Clinical Laboratory Update

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## From the desk of the Public Health Laboratory Director

### Do You Know What's in the STI National Strategic Plan?

The five year plan aims to reverse the recent rise in STIs in the U.S. The plan sets a vision as well as goals, objectives, and strategies to respond to this STI epidemic. It also includes indicators with measurable targets to track progress. The plan provides a roadmap for a broad range of stakeholders, including public health, laboratory, health care, government, community organizations, educational institutions, researchers, private industry, and academia to develop, enhance and expand STI prevention and care programs at the local, state, tribal, and national levels over the next five years.

<https://www.hhs.gov/sites/default/files/STI-National-Strategic-Plan-2021-2025.pdf>

### Air Surveillance of Respiratory Pathogens

With support from the Rockefeller Foundation's [U.S. Regional Accelerators for Genomic Surveillance](#) program, Midwest partners are working to use of air samplers to detect SARS-CoV-2 and other respiratory pathogens in congregate settings. Throughout the fall of 2021, partners have implemented AerosolSense air samplers in schools, shelters, bars, daycares, and other congregate settings. The primary partners include the UW-Madison, University of Minnesota, the City of Milwaukee Health Department, Mayo Clinic, MN, and the Marshfield Clinic. ThermoFisher has provided AerosolSense air samplers, and cartridges. Initial findings demonstrated that congregate locations could reliably detect SARS-CoV-2, other respiratory viruses and coordinate data collection using cloud-based systems. The goal of this project is to use PCR and sequencing to track specific viral genotypes through space and time.

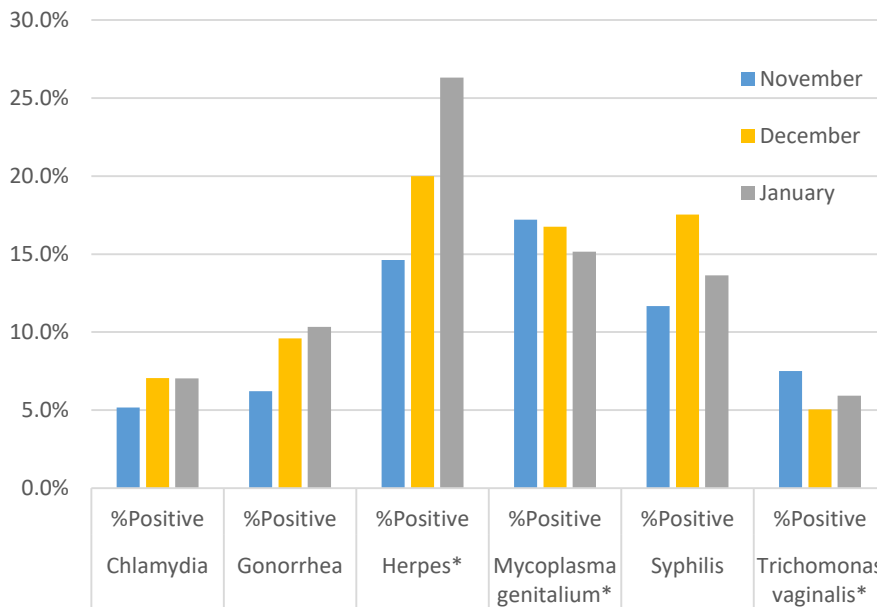
Links to related information & data:

[MHD COVID-19 Testing website](#)

[MHD COVID-19 Situation](#)

[WSLH Laboratory Surveillance Report](#)

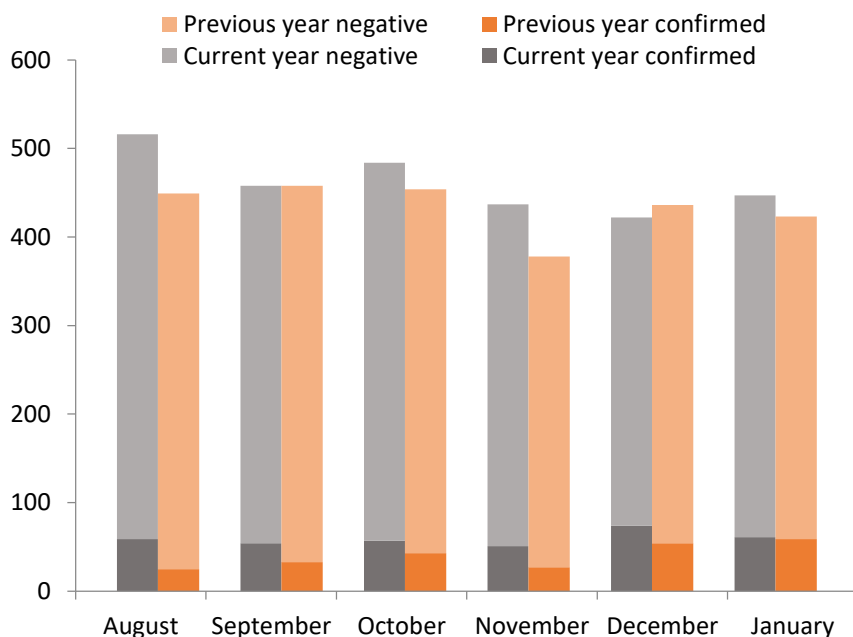
## Sexually Transmitted Infections



**Figure 1:** Percent positivity for specimens screened using molecular or serological assays for the given organism.

\*Not reportable as per WI DHS 145.04 (3) (a)

## Syphilis Surveillance



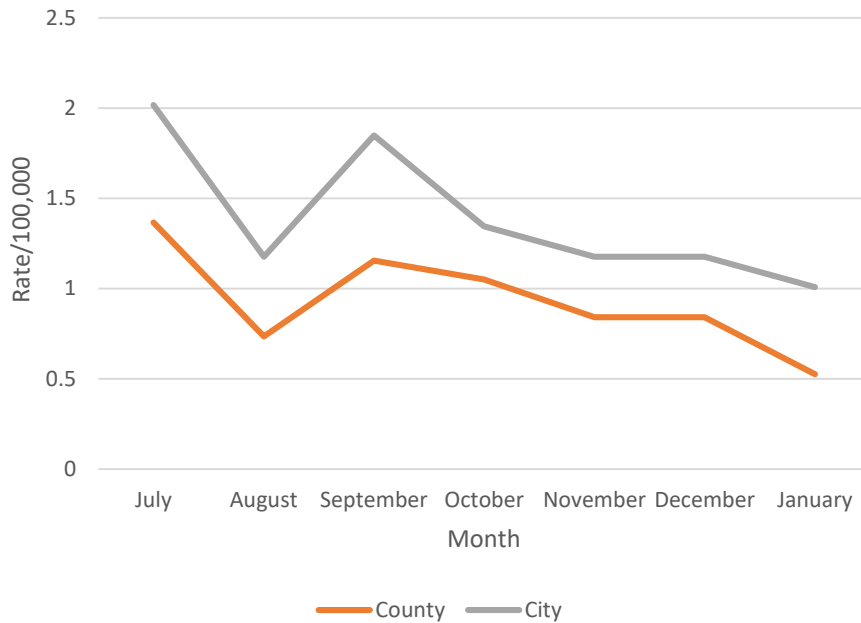
**Figure 2:** Monthly comparison of syphilis data with year over year comparisons.

Number of specimens screened at MHD, darker bars represent confirmed tests.

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## New HIV Infections

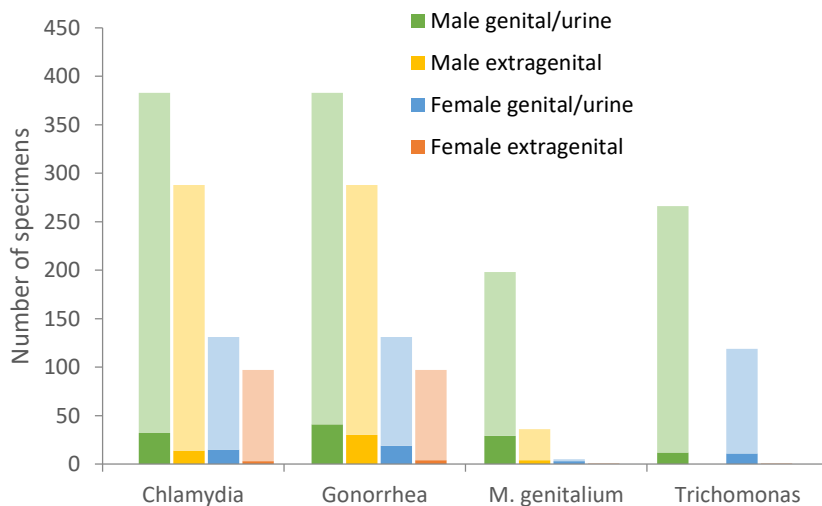


**Figure 3:** Monthly comparison of rate of new HIV infections in Milwaukee County and the City of Milwaukee, using data obtained from the Wisconsin Department of Health Services. Numbers are provisional and subject to change.

For statewide HIV data, visit:

<https://www.dhs.wisconsin.gov/hiv/data.htm>

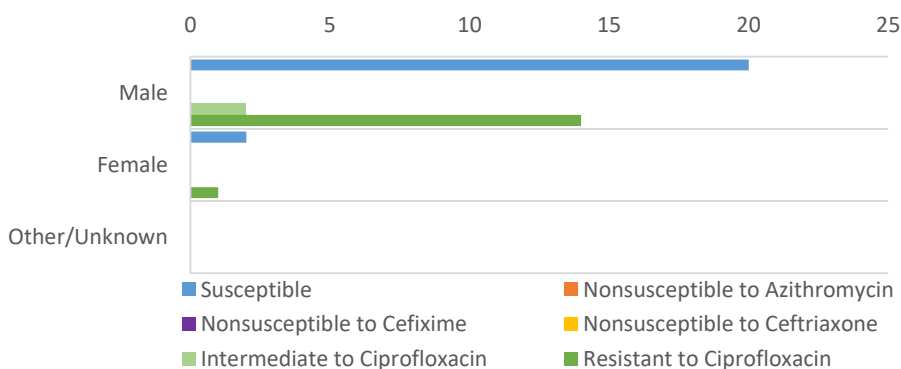
## Sexually Transmitted Infections by Source



**Figure 4:** Distribution of STIs detected using NAAT. In January 2022 6.9% of male and 7.9% of female specimens screened were positive for Chlamydia. 10.6% of male and 10.1% of female specimens were positive for Gonorrhea. 14.1% of male and 3 of the 6 female specimens were positive for *M. genitalium*. 4.5% of male specimens and 9.2% of female specimens were positive for *Trichomonas*.

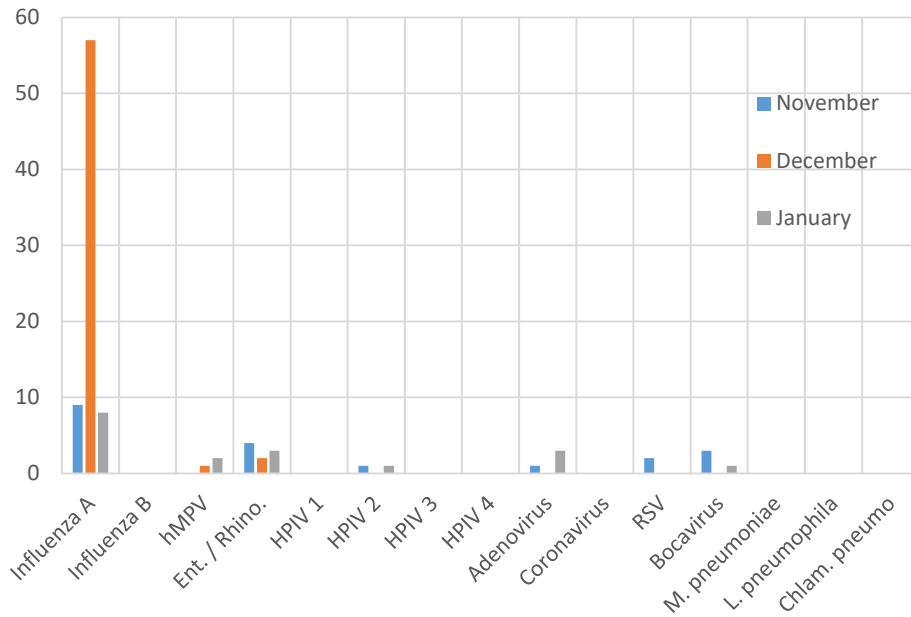
*Note: Darker bars indicate positive specimens.*

## Gonorrhea Antimicrobial Susceptibility Testing



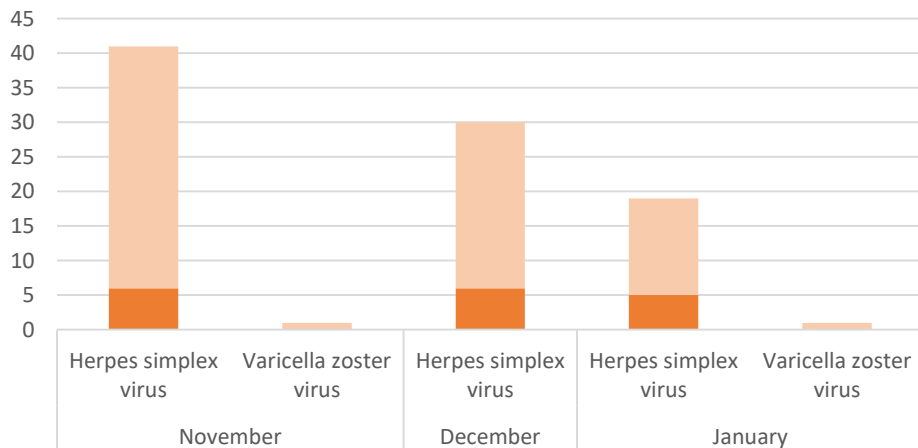
**Figure 5:** Antibiotic susceptibility profile of Gonorrhea isolates identified in males and females. In January 2022, 16 of 39 cultures tested were found to be intermediate or resistant to Ciprofloxacin according to CLSI guidelines. MHDL tests for antibiotic resistance to Azithromycin, Ceftriaxone, Cefixime and Ciprofloxacin.

## Respiratory Infections



**Figure 6:** Respiratory pathogens detected using a Respiratory Pathogen Panel (RPP) and/or RT-PCR Influenza assay.

## Viral Surveillance

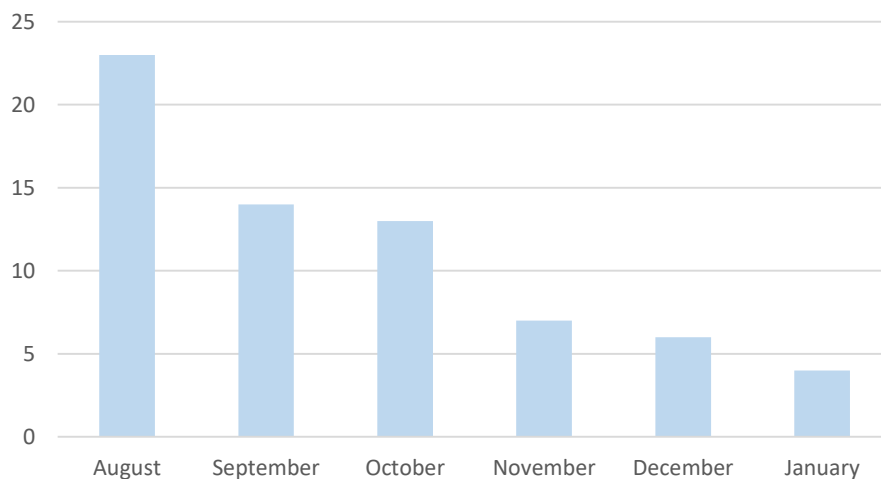


**Figure 7:** Specimens tested using molecular methods.

*Note: Height of bar indicates number of specimens tested.*

*Darker bars indicate DNA/RNA detected by virus culture, real-time PCR and/or nucleotide sequencing analysis.*

## Legionella Testing



**Figure 8:** Clinical specimens tested using culture and molecular methods.

\*MHDL is one of the **CDC ELITE** certified sites for environmental *Legionella* testing. See the Winter 2019 issue of the [APHL Bridges newsletter](#) for more information.

*Note: Darker bars indicate confirmed Legionella pneumophila by culture and/or real-time PCR.*